NOV. Vol. 7

San Antonio Radio Club

1975 No.1

BULL-ETIN

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Meets first and third Fridays at 7:30 P.M. at the Red Cross Building, 90 Brees St. ALL who have an interest in amateur radio are cordially invited to attend.

Bull-etin Editor, Dean Davis W5BGE Asst. Ed., Maybelle Davis

Circulation Mgr., Bob Via WB5FDT

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Letters to the editor should be addressed to 1518 Santa Anna, San Antonio, Tx 78201

WRIGHT WORDS

By K5CDT Jim Wright

The San Antonio Radio Club's new year has begun and I would again express my appreciation to the membership for honoring me with this office. The president of an organization such as this can successfully guide and coordinate activities to the extent that he is assisted by the individual members. To date your support has been most ably demonstrated by those of you have have accepted posts as chair men and members of the various committees. Your cooperation in this and other ways is most appreciated.

I recently represented our club in a couple of informal meetings with Dr. Ted Cohen, W4UMF. He is a member of the ARRL RFI Task Group and was in San Antonio to present a paper concerning RFI before a section of the IEEE. Ted was instrumental in the preparation of and the introduction by Congressman Charles A. Vanik of Ohio of HR7052. This bill would grant the FCC authority to require manufacturers of home entertainment electronic devices sold in the U.S. to use protective components which would reduce interference from radio frequency energy. This would include all TV sets, stereos, tape recorders and radios. The complete text of HR7052 may be found on page 76 of September, 1975 QST. You are urged to study this bill and write your congressman in support of it.

Also write your letters to: Hon. T. H. Macdonald, Chairman, Subcommittee on Communications, House of Representatives, B-331 Rayburn Building, Washington, D. C., 20515.

In addition, you will be asked to sign a petition in support of HR7052. Anyone having questions or desiring additional information concerning this most important matter to all of us in Amateur Radio should feel free to contact me.

73, Jim K5CDT, President of SARC.

(Editor's Note: For highlights of Dr. Cohen's paper given to the IEEE, see pages 7, 8)

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SARC PROGRAMS ANNOUNCED de George WB5LDN

Nov. 21--A SWAP-SELL table will be set up. Bring your extra equipment you want to get rid of. Heavy gear can be shown in the parking lot from the car as early as 6:30 p.m. Sweep off cobwebs and bring gear to the swap fest!

Jan. 16--NEWCOMERS NIGHT--Plans are underway to welcome prospective Amateurs prior to starting of the second Code and Theory Class, which will start in Feb. "Hams Wide World" will be shown, a film furnished by ARRL.

Feb. 20--OLD TIMERS' NIGHT--This is an annual affair, a MUST to attend!

Technical Topics

By W5LFM CAL GRAF

All radio amateurs are familiar with the monopole antenna and its use --it is half a dipole and serves as a good antenna when fed properly. And amateurs are all familiar with a permanent megnet and that it has two poles designated north and south. But what do we know about the magnetic monopole? What is it and why? A recent find may be the discovery of the century as it ranks as a major scientific event. The find--a particle--called a monopole because it consists of a single charge or pole rather than two. The monopole has a role in magnetism comparable to the electron in electricity and is extremely rar

Physicists have tried for a long time to find a unit of magnetism--with only one pole instead of the normal two (north/south)--in places such as magnetic rocks, the ocean floor and even on lunar soil. But the search was fruitless until scientists at the Universities of Houston and California announced that they had finally tracked one down in the upper atmosphere. To find the monopole, scientists exposed materials through which particles have traveled to chemicals which enlarge the particles tracks. By analyzing the treated tracks, experts can make estimates of the masses, speeds, and other characteristics of the particles. The test apparatus was flown at 130,000 feet for 2 1/2 days in a balloon over Souix City, Iowa, looking for ultra-heavy cosmic rays. Photographic films used in the experiments were examined for 2 years at the U. of H. While all tracks were identified, the one unusual track observed could have been produced only by a magnetic monopole. The monopoles are rather powerful. Two of them with opposite poles, one north and one south, would meet with a force 18,000 times as great as that released when a proton and electron collide. Some possible uses? Harness the monopole powerful energy to drive ships across the sea by confining the particles in a ship and relying on the earth's magneti field to drive them across the oceans. But this seems far away; even if the monopole is confirmed as existing, no one has yet figured out a way to capture a bunch of them Perhaps someone in SARC will grow up and do this some day.

In past issues of the BULL-ETIN, we've talked about the prices of pocket calculators. The price ranged from $100 to $150 for the four function units about 3 years ago. Texas Instruments estimated that the price would one day drop to where they would cost that of an ordinary transistor radio--$5 to $10. And they have already reached that level, for the Novus 650 is now being offered in San Antonio for $9.88 for the four function, six digit readout with fixed decimal. That price has already reached the throw-away price as it would cost almost twice that much to have them repaired.

There is a small danger for those who carry their pocket calculators in their pockets. There is one instance so far of a man who accidently shorted out his battery charger terminals with a ball point pen. The NiCad batteries were shorted out and dischared at a high rate. And a NiCad battery will deliver power till it gives up the ghost, getting very hot in the process. In the instance cited, the NiCad batteries blew up, with a bang big enough to knock the man down. That seems to be a rare instance, though, and is more likely to be injured from laughing at one of Ivan Mangold WA5RN Texas Aggie jokes!

Earlier, we had talked about the talking IC chip and how it would be used so much in the future. Well, Master Specialties Co. has introduced their new Model ARC 9500 Audio Response Calculator which announces each entry and the results of every calculation using a solid-state synthesized voice which is stored on a read only memory (ROM) after digitizing. The CMOS (complementary metal-oxide semiconductor) circuits pronounce the ten numerals and the four algebraic functions. The calculator is intended for use by vocational education of the blind and in the early development and audio reinforcement of basic math concepts for sighted students. It is priced at $565 so it has a long way to drop before most amatuers can afford one.

Speaking of dropping, did you know that an attosecond is one billion billionths of a second? It takes light about 30 million attoseconds to move one centimeter (about a third of an inch). And that's faster than the CW boys can make contacts on field day. Regards for now. W5LFM Cal Graf.

Merry CHRISTMAS

Dec. 6, Saturday

DINNER DANCE

CQ ALL SA AREA AMATEURS
San Antonio Radio Club Annual Christmas Dinner-Dance will be Sat. Dec. 6, at the Arden Grove Party House, 102 Ninth St. ALL Amateurs & XYLs, YLs or OMs invited.

Tickets for Dinner-Dance $7 per person. High School members & dates, half price.

Social hour, 6-7 p.m. Set-ups furnished. (BYOB) Dinner will be served at 7 p.m
Menu: tossed salad, steak 8 oz, stuffed potatoe, spiced apple, and ice cream
Dancing 9 till Midnight. Music by 'Pepe' Rodriguez and his orchestra.

GET DINNER-DANCE TICKETS FROM:

Frances Bruemmer	W5KQG	344 5134
Jim Wright	K5CDT	655 2346
George James	WB5LDN	655 3934
Larry Humlicek	WB5PAF	341 8092
Frank Box	WA5VFM	734 5893
Gene Jank	W5EJT	342 2225
Ella Munsch	W5TSE	341 4191
Bob Wheaton	W5PKK	695 8430
Roy Albright	W5EYB	822 7296
Bill Way	WA5QHG	433 9168
Bob Baldwin	WN5MCJ	734 6148
Dean Davis	W5BGE	735 1622

S.A. Radio Club

CLAY COMMENTS

FREQUENCY SYNTHESIZERS

By W5ZPV Clay Laster

The use of frequency synthesizers in amateur radio is rapidly becoming more apparent. Many companies offer two meter rigs which allow the amateur to "dial up" his desired operating frequencies without the use of a multiple bank of crystals. Heathkit has now announced the entry into this field with their HW-2026 Synthesized Two Meter Rig. Offset repeater frequencies of 600 KHz as well as direct transmitting and receiving frequencies are now possible with the turning of a "thumbwheel" switch.

Some basics of frequency synthesizers may be of interest to the amateur. Frequency synthesizers fall into two general categories. The first type uses a number of precise frequencies (normally generated by a standard crystal oscillator and divided down by digital dividers or multiplied up by harmonic generators) which are combined to produce the desired operating frequency. This approach required complex circuitry to eliminate spurious frequencies caused by the sums and products of a number of signals present in this process. This approach is generally not applicable to amateur radio equipment.

The second type of frequency synthesizer uses the phase-locked loop method. The main component of the phase-locked loop (or PLL) is the voltage controlled oscillator or (VCO). Figure 1 shows a basic circuit for a VCO. A field effect transistor (FET) is connected in a Colpitts oscillator circuit with L_1 and C_1 being the primary frequency determining elements. C_2 and C_3 are DC blocking capacitors, C_4 and C_5 form the oscillator feedback elements, and C_6 is a bypass capacitor. Varicap Diode, D_1, allows the frequency of the oscillator to be controlled by inputting a variable DC control voltage across the Varicap. Thus some DC voltage can be applied to the Varicap and control the frequency of the oscillator. If this voltage is developed as a function of a comparison of the Colpitts oscillator frequency with a precise frequency such as a crystal oscillator, then the output of the Colpitts oscillator will "track" accurately at the desired operating frequency.

The tracking function is accomplished with the use of the PLL. A basic block diagram for a PLL is given in Figure 2. While the output of a PLL for the amateur two meter transciever will generally be in the 8 MHz, or 24 MHz frequencies (for multiplication up to 144 - 147 MHz), this PLL is set up for 1.0 to 2.1 MHz for simplicity. Such a PLL could be used to control a broadcast band radio receiver. The standard reference oscillator output is fed to a digital divider network which divides the frequency down to 10 KHz. Two decade dividers such as the readily available SN7490 IC's could be used for this purpose. This 10 KHz reference frequency is fed into one input of a phase detector. Again, readily available IC's can be used. An output of the voltage controlled oscillator is fed into a digital counter circuit. Here the actual division factor depends on the output frequency which is required from the VCO. For example, if a precise 2.1 MHz output is required from the VCO, then the divider would have to count down by a factor of 200. To change the divider count down, a set of thumbwheel switches can be connected to divider IC's to change the count as required. The output of the N divider is fed into the second input of the phase detector. If the VCO is not operating at the required frequency, the output of the phase detector (a DC voltage with small variations of AC present) will be applied to the VCO thru the Loop Filter and thus change the frequency of the VCO to the required value. The purpose of the Loop Filter is to smooth the ripple present in the output of the phase detector.

References: 1. HEATHKIT Catalog 806, dated Christmas 1975
2. A Practical Approach to Two-Meter Frequency Synthesis, Peter J. Bertini, K1ZJH, and Richard Van Hooft, WB2MBI, QST, June 1973.

73. Clay W5ZPV.

(For Figure 1 and Figure 2, see page 5.)

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FOR SALE--Heath 5" triggered scope, 10 months old, excellent condition, 1 meg input impedance, 30 MV per CM senitivity, freq. response DC to 5 mHz. Heath digital multimeter, model SM-1212. Call George WB5LDN, 655 3934.

FOR SALE--PA-140 KLM amplifier, $115. AR 40, medium duty rotater w/solid state control box, brand new in sealed carton, $50. Call Ralph Fellows WB5FTV, 675 2743.

(For sale items are welcomed, at no charge, and will be used as space permits.)

(Continued from Page 4.)

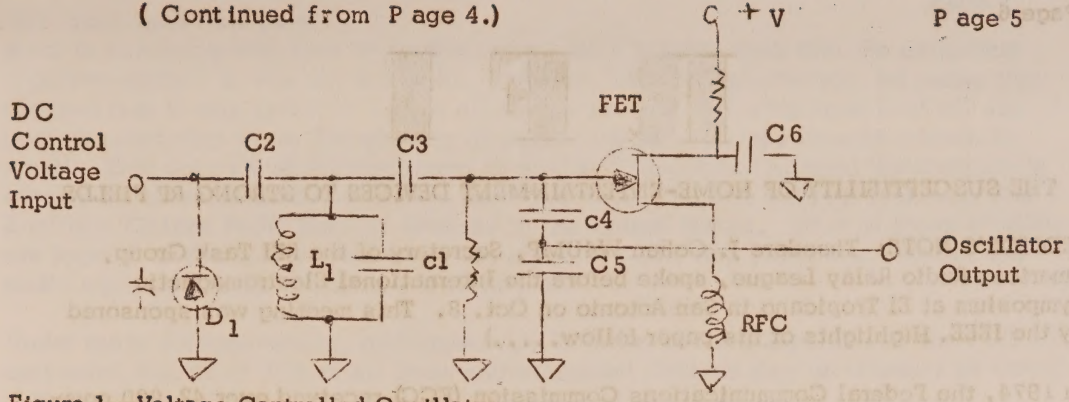

Figure 1--Voltage Controlled Oscillator

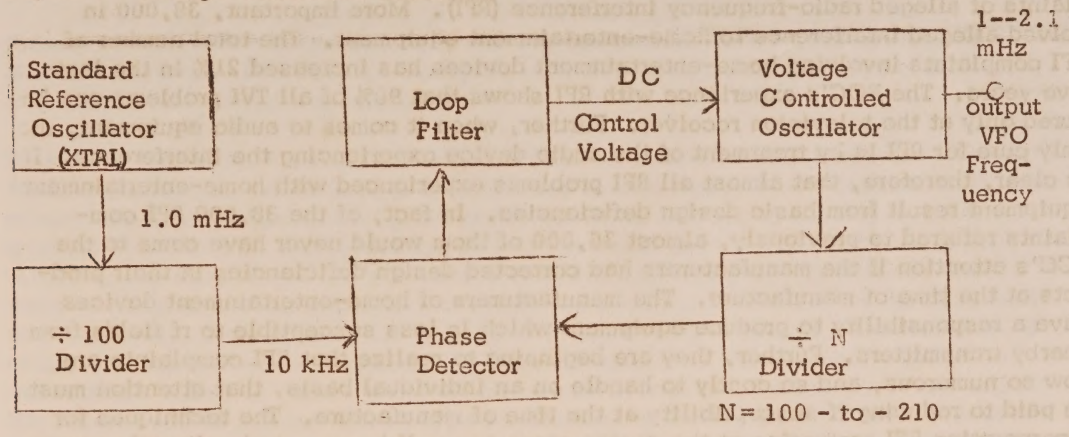

Figure 2 Block Digram of Phase-Locked Oscillator

de Clay W5ZPV

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NEWS FROM ARRL HEADQUATERS

We have just learned from the Federal register of October 20th that on October 1 the Commission adopted a Report and Order in Docket 19973, amending Part 2 of the Commission's rules and regulations to reflect certain allocations changes above 40 GHz, exactly as proposed in March 1974.

Effective Nov. 14, the Amateur radio service will share the following bands on a secondary basis with the Radiolocation service: 48.0--50.0 GHz.; 71.0-76.0 GHz. 165.0-170.0 GHz.; 240.0-250.0 GHz. In addition, all above 300 GHz, is allocated to the Amateur service.

A portion of one paragraph of the Report and Order is of interest:

> "5. . . . . Also, since no equipment capable of operating at frequencies above 300 GHz is expected to be available in the foreseeable future, neither the ITU. the Office of Telecomunications Policy (OTP), or the Commission suggested any allocations there. Instead, we have followed our usual practice of allowing Amateur stations to operate on these unallocated frequencies."

Now, there's a challenge!

The next issue of 73 Magazine (which would normally be the November issue) will be a combined November/December issue. Their January issue, in the new size format, will be out at the time that other publishers are issuing their December issues. It is unclear as to whether 73 subscribers get 11 issues for the price of 12, or what.

One cause of delays in the processing of Amateur license applications at the FCC's Gettysburg office turns out to be that routine applications for the modification, renewal, or upgrading of licenses with control station (CTL) or auxiliary station (AUX) privileges also involve the manual updating of the records on the associated remotely controlled station. This means that such applications must include the call sign and the name of the licensee of the associated station (usually a repeater) so the records can be located, even though there is no place on the form 610 to enter this information; in fact, it has only been in the past week that we learned from the Commission that this information was necessary. (Sept. 11.) For example, if W5XYZ is a control station for WR5AAZ, when he renews, modifies, or upgrades his license he should attach a statement similiar to this: "W5XYZ is a control station for WR5AAZ, licensed to John Q. Ham as trustee for the Central Arkansas AREC."

RFI

THE SUSCEPTIBILITY OF HOME-ENTERTAINMENT DEVICES TO STRONG RF FIELDS

(EDITOR'S NOTE: Theodore J. Cohen W4UMF, Secretary of the RFI Task Group, American Radio Relay League, spoke before the International Electromagnetic Symposium at El Tropicano in San Antonio on Oct. 8. This meeting was sponsored by the IEEE. Highlights of his paper follow.....)

In 1974, the Federal Communications Commission (FCC) received over 42,000 complaints of alleged radio-frequency interference (RFI). More important, 38,000 involved alleged interference to home-entertainment equipment. The total number of RFI complaints involving home-entertainment devices has increased 21% in the last five years. The FCC's experience with RFI shows that 90% of all TVI problems can be cured only at the television receiver. Further, when it comes to audio equipment, the only cure for RFI is by treatment of the audio device experiencing the interference. It is clear, therefore, that almost all RFI problems experienced with home-entertainment equipment result from basic design deficiencies. In fact, of the 38,000 RFI complaints referred to previously, almost 36,000 of them would never have come to the FCC's attention if the manufacturers had corrected design deficiencies in their products at the time of manufacture. The manufacturers of home-entertainment devices have a responsibility to produce equipment which is less susceptible to rf fields from nearby transmitters. Further, they are beginning to realize that RFI complaints are now so numerous, and so costly to handle on an individual basis, that attention must be paid to reducing rf susceptibility at the time of manufacture. The techniques for incorporating RFI protection at the design stage are well known, and ordinarily represent a cost on the order of a percent or two of the cost of the product being marketed. For competitive reasons, however, it is unlikely that all manufacturers would voluntarily move to reduce the susceptibility of their devices with federal legislation. Thus, the FCC has indicated that it will seek RFI legislation in the 94th Congress which would give it the right to regulate the manufacture of home-entertainment devices so as to reduce its susceptibility to strong rf fields. Such legislation has already been proposed to the 94th Congress by Congressman Charles A. Vanik (Ohio). Even with enabling legislation, however, the FCC would have to prescribe regulation suchthat the susceptibility to home-entertainment devices to strong rf fields is reduced to "acceptable levels".

Radio frequency interference to electronic home-entertainment devices is an ever increasing problem in today's rf environment. Fed by the technology that developed during and following World War II, the problem is growing at an alarming rate, and has become a widespread source of irritation between radio operators and their neighbors. Home-entertainment electronic devices now abound, with Americans owning and operating more than 120 million television receivers, over 400 million radios, and millions of other audio and video devices. Given the tremendous growth in radio communications over the past decade, and the large number of transmitters now found in close proximity to home-entertainment equipment, it should surprise no one to learn that RFI is one of the most difficult problems Amateur operators, Citizen Band operators, and operators in other services face in their day to day operations.

On no device is RFI exhibited so dramatically as on a television receiver. The experience of the Federal Communications Commission (FCC) indicates that in 90% of all TVI problems, spurious responses in the television receiver are the cause of the problem. It follows, therefore, that in 90% of all TVI cases, the problem can only be cured by treatment of the television receiver. Thus, in the majority of TVI cases, we are not concerned with interference per se, but rather, with the inadvertant interception of signals by devices which were not intended to receive radio signals. This is unquestionably true when it comes to audio equipment (phonographs, Hi-Fi's, electronic organs, inter-coms, etc.); with these devices, the only cure for RFI is by treatment of the device intercepting the rf signal. After all, there is nothing a radio operator can do to his transmitter which will stop a phonograph from acting like a short-wave receiver.

For some time, certain spokesmen for a national association of electronic manufacturing of home-entertainment equipment have asserted that less than 1% of the equip-

(RFI continued on Page 7.)

RFI continued from page 6.

ment in use today will ever be located neara radio station such that the equipment receives signals it was not designed, intended, or tuned to receive. As such, they claimed that it was unfair to burden all consumers with the additional cost of suppression circuitry since the quantity of equipment affected was thought relatively small. That only 1% of the equipment in use may experience alleged interference is clearly an underestimation. Today, there are about 250,000 Amateur stations, and 2 million Citizen Radio Service stations in the United States. Most of these stations are located in the homes, and thus, are close to television receivers, radios, and audio equipment used for home entertainment.

Under these circumstances, and especially in urban and suburban areas, the FCC has estimated that 50 or 70% of all home-entertainment devices may be affected by strong rf fields at some time.

Finally, it should be noted that very few RFI complaints derive from operations of Amateur stations. In 1974, for example, only 400 complaints of alleged RFI were associated with Amateur operations.

It is clear that almost all alleged RFI problems experienced with home-entertainment devices result from basic design deficiencies in this equipment. The few small components or filters which would prevent RFI are often left out of otherwise well-designed products as manufacturers attempt to shave costs, and hence, to reduce the prices of their products. As the number of RFI cases continues to rise, however, some manufacturers are beginning to recognize their responsibility to the consumer to provide equipment which will operate in today's rf environment. For example, a recent Consumer Products Engineering Bulletin issued by the Electronic Industries Association states in part: "Original equipment manufacturers can no longer expect the serviceman to correct normal type interference problems in the field. The cases are becoming too frequent and the cost of correction too high to ignore this interference in the original design".

It is a foregone conclusion that as long as the inclusion of additional components for susceptibility reduction increases a manufacturer's costs, however slightly, there will be a reluctance to take steps to improve equipment designs by the manufacturers themselves. If all manufacturers were required to install the necessary filtering components, however, none would gain a competitive edge. Thus, what now appears to be essential is reasonable federal legislation which would give the FCC the right to regulate the manufacture of electronic home-entertainment equipment, and in doing so, to protect the unknowledgeable consumer who is unable to protect himself.

The FCC has indicated that it will seek RFI legislation as part of its legislative package to the 94th Congress (1975-1977). In his comments to a recent meeting of an IEEE EMC, Chapter[3], Mr. Raymond Spence, FCC's Chief Engineer, stated that while the Commission will make every effort to cooperate with manufacturers of home-entertainment devices in resolving RFI problems, the Commission would vigorously seek federal legislation which would give it the right to regulate the manufacture of this equipment.

Consumer advocates with the 94th Congress,however, are already addressing the RFI problem. On May 15, 1975, Congressman Charles A. Vanik (Ohio), introduced H.R. 7052. This Bill would "....amend Section 302 of the Communications Act of 1934 to authorize the Federal Communications Commission to prescribe regulations with respect to certain electronic equipment that is radio frequency energy interference". The Bill was referred to the House Committee on Interstate and Foreign Commerce, and specifically, to the Subcommittee on Communications (The Honorable Torbert H. Macdonald, Chairman). An early hearing on this Bill is being sought.

Even with enabling legislation, the FCC would have to prescribe regulations such that the susceptibility of home-entertainment devices to strong rf fields is reduced to "acceptable levels". That is, the FCC would have to prescribe susceptibility standards. Voluntary case-by-case assistance by responsible manufacturers is only a temporary solution to RFI problems. A long-term solution requires legislation which will enable the FCC to specify and enforce RFI protection standards in the manufacture of home-entertainment devices--legislation similar to that proposed by Congressman Vanik in H.R. 7052. It will be necessary for the Commission to establish reasonable susceptibility standards for this purpose. (Ed.Note:Amateurs are urged to write their congressman requesting support of H.R. 7052.)

Alamo DX Amigos

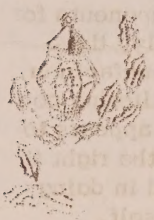
By W5OSJ BRUCE WOODARD

The August meeting was held at the shack of our almost constantly mobile secretary John W5LPO. He surprised us all by attempting to collect dues through the end of the year--lot sa luck, John! Plans for a club DXpedition to the Caribbean area are still progressing--something may be definite on this shortly. The September meeting was held at the shack of Bruce W5OSJ. The main order of business was the election of officers for the new year. Gene Jank W5EJT was elected president; Bill Parry K5TSR, vice-president; John Shean W5LPO, secretary and Corky Sarvis WB5CIT, treasurer.

Antennas are the never ending problem of some members. After Les' 204BA was deposited in an apple tree by a recent twister he found his linear producing more apple cider than RF. Bill's 4 element chicken-coop can't seem to stand up under anything blowing over 20 MPH, and shucks, you get faster hot air than that around here in the normal pile-up. Jack Bible tuned up his new quad pointed at the ground from about 10 feet up, worked all sorts of good stuff, ran it on up to where it belonged and couldn't work across town.

A recent article in the Smithsonian magazine reports that the Edmund Scientific Co. has perfected an AM receiver weighing a mere six tenths of an ounce. Must be some thing to it as Jim Rutledge was seen recently with an ear piece in one ear and a two inch antenna sticking out the other. Scientific developments are never ending--with Corky's younger brother, (the six pack purloiner) seen skulking around out back of Les' shack, the rumor that the apple cider incident had developed into a full blown moonshine still, must be true.

HF REPEATER?? Anyway, it went like this (calls and names changed to protect the guilty): Usual multitude piled up on Father Moran;



"You there, Jack?"
"Yeah, that you, Joe?"
"Yep."
"9N1MM de W9XXX, Father, W5XXX is on freq. trying hard to get thru--cud U give him a call?"
Any by golly--it worked! Just goes to prove that the dedicated DXer can always find a way.

You faithful ones who have followed the unfolding saga of the HQ120 will be pleased to know that Harry got all the chewing gum, bailing wire and bottle caps properly rearranged and the old junker is better than ever. The impossible just takes a little longer.

John W5LPO and XYL Lucille are on an extended trip through the Western States. Les W5BE is in daily contact with him on 40 and 20--both SSB and CW.

From HR Report we read that propagation through November 9 includes: Solar activity continues to remain low, but with the exception of a minor low period or two may still leave the DXer with what may well be the season's best offering during the next few weeks. 28 MHz buffs are advised to try scatter paths into Europe and the north Pacific (beam headings a little south of "normal") around "normal" open times for those paths, just as if the band were about to open.

November 29 and 30--CW blast off. Be Prepared!!

73 es DX, Bruce W5OSJ.

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CODE AND THEORY CLASS The Northwest YMCA in cooperation with the San Antonio Radio Club will be offering classes in code and theory for novice class license for amateur radio operators. Classes will be held on Wed. evenings beginning Oct. 22 through Jan 21. The class will be held from 6:45 to 9:45 P.M. and will meet for 12 weeks. The class will be taught by Calvin Graf W5LFM. Some cassette tape recorders will be furnished for code practice. Each student will be asked to purchase two books costing approximately $6.50. The class fee is $25.00 for the 12 weeks course. You may register at the Northwest YMCA, 435 E. Sunshine prior to the start of the class. Call the YMCA office at 735-9231 for more information. (WANTED--Need applications for instructors for both the Novice and General Classes in Feb. For info on salary, etc., contact Jim Wright K5CDT, 655 2346.)

Who's Wright?

By W5BGE

Jim Wright K5CDT, the new president of SARC, is a very personable fellow; a quiet, unassuming individual; yet a forceful one. Active on 2 meters and the HF bands, became interested in Amateur radio at the age of 14 as a Boy Scout and received his Novice license.

Jim has lived in SA for 7 1/2 years. Prior to this he was a launch officer in a minute man missile wing at Grand Forks AFB, North Dacota. He has a BA in math from UT at Austin. He is employed by the National Bank of Commerce as an Asst. Vice Pres. of the Petroleum and Minerals Division.

Jim and his XYL, Marilyn and their two girls, Laurette, 16, and Marianna, 11, reside at 4518 Moana Dr. They are active in the St. Marks Espicopal church.

He is on the air with a HT37 and SB301 on HF and a Genave GTX 200 on 2 m.

Under Jim's leadership, the SARC should have a good opportunity to advance Amateur radio in the SA area with YOUR help. How about it? de Dean W5BGE

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FROM HR REPORT

CB "SLIDERS" are wandering further afield as 27 mHz (and adjacent frequencies) get more and more crowded. One turned up on 7250 Sat., Oct. 4, around 0800 Z announcing that he and his buddies were tired of the rat race on 11 meters and figured 40 might be a good place to exercise their transceivers! When a number of Amateurs across the country objected to his invasion he announced (with a remarkably potent signal) that as a citizen he had the right to operate any transmitter he wished on any frequency he wished to talk to anybody he wished and anyone who thought otherwise could go scratch!

"Sliding" a little above or below the assigned 23 CB channels seems to have become accepted practice for many CBers and a few venturesome souls have even shown up on the low end of the 28 mHz Amateur band. However, in the past CBers wanting to check out their all-band rigs on the Amateur frequencies have been devious enough to use Amateur calls and some have even gotten away with it for extended periods. Was this character unique or does he foretell of a new breed of radio lawbreakers? The prospect of the estimated million or so unlicensed CBers spreading out across the entire radio spectrum is a fearsome one indeed!

(Ed. Note: This is one of the things we were trying to point out in our Sept. issue of the BULL-ETIN--that we were primarily concerned over the CBers who will come into the Amateur bands without taking an examination, they are the ones we won't have any control of at all!)

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THE TREASURER'S DREAM

By Frank WA5VFM

I fell to sleep the other night and while I had my snooze,
I dreamed each member stepped right up and promptly paid his dues.
But when I found 'twas but a dream I nearly threw a fit.
Its up to you to make it true. SUGGESTION "Please remit"

DUES ARE DUE

We want YOU to continue your membership and support of SARC. You need the Club, if you are a San Antonio area Amateur. THE CLUB NEEDS YOU! your dues payments help defray necessary club expenses, and insure that you will continue to receive the club BULL-ETIN wherein you can keep abreast of radio Amateur activities in this area. Mail your annual dues ($6.00, wife $1.00, please) to SAN ANTONIO RADIO CLUB, 1431 West Hollywood, San Antonio 78201. Membership card will be mailed to you.

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SARC MEMBERSHIP - APPLICATION/RENEWAL

NAME_____CALL_____

ADRESS _____

CITY_____ZIP_____

ARRL Member_____AREC_____Telephone_____

(Dues $6 per year, $1 for XYL) - Mail to San Antonio Radio Club, 1431 W. Hollywood San Antonio, Texas 78201

THE POT IS BEGINNING TO BOIL

An Editorial, by the West Gulf Division ARRL Director

Amateurs in these United States view the fantastic growth of CB in recent years with increasing concern. Long ago the FCC abandoned hope to control this undisciplined mob, many of whom at that time desired amateur privileges, but lacked either the intelligence or the motivation to qualify for a General Class license.

During that area the solution may have been simple, merely withdraw those frequencies until adequate control techniques had been devised, or perhaps simplify the General Class theory test and reduce the required code speed to 10 wpm. It has been demonstrated that practically anyone with normal intelligence can learn to copy 10 wpm. That is not true of 13.

Now, failure of the FCC to control the situation in the beginning has created a condition of increasing chaos which presents an extreme hazard to radio amateurs. The great publicity generated by the lawless type of CB'er has excited the curiosity of millions who are following the example set by that early group.

In order to get in on the action thousands are rushing to the radio store to purchase one of those boxes which permit one to tune in on Smokey the Bear conversations; mostly without regard as to whether or not they have a real need for radio communication.

In the meantime, suppliers and manufacturers are rushing to the banks with their fists full of hundred dollar bills, heedless of the chaos they are creating for the future, when thousands of the new breed of CBer will have sated their love for short range communication and will say: "CB is fine,but Amateur Radio offers a lot more interest, so let's go there", totally ignoring regulations requiring a stop at the Federal Building for a license.

This is no time to argue where lies the blame for this situation. It is significant to note however, that CB suppliers are eying our frequencies with envy, and have made official note of the disparity between the number of Khz we occupy, with those authorized the legal, and illegal CB industry. It IS time to consider some form of corrective action in order to prevent further encroachment by unlicensed persons into our frequency bands.

It appears that large amounts of CB gear is currently being sold to youngsters and impulse buyers, motivated out of curiosity because they have been exposed to so much yap-yap by the news media over the trucker situation, etc. Growth of CB by this group can be expected to taper off after it reaches its zenith. Whether that apogee will be reached before amateur radio has been irreparably damaged is an unknown factor.

Most certainly, if we are to survive, it will require (1) Close cooperation between ARRL and FCC, (2) Authority for FCC to control all types of transmitters, licensed or no, and (3) Adequate personnel for FCC to enforce the radio regulations.

Obviously we amateurs can have no valid objections to provisions for a Citizens Radio Service based upon current CB regulations. However, we cannot tolerate frequency assignments, or rules, which would encourage infiltration into areas granted us by internatioanl agreement.

73, Roy L. Albright, W5EYB, Director.

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